

Salton Sea Monitoring Effort

California Department of Fish & Wildlife

Salton Sea Program

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OUTLINE

- Pupfish Monitoring
- Bird Monitoring
- Tilapia Monitoring
- Concluding Remarks



CDFW Desert Pupfish Surveys

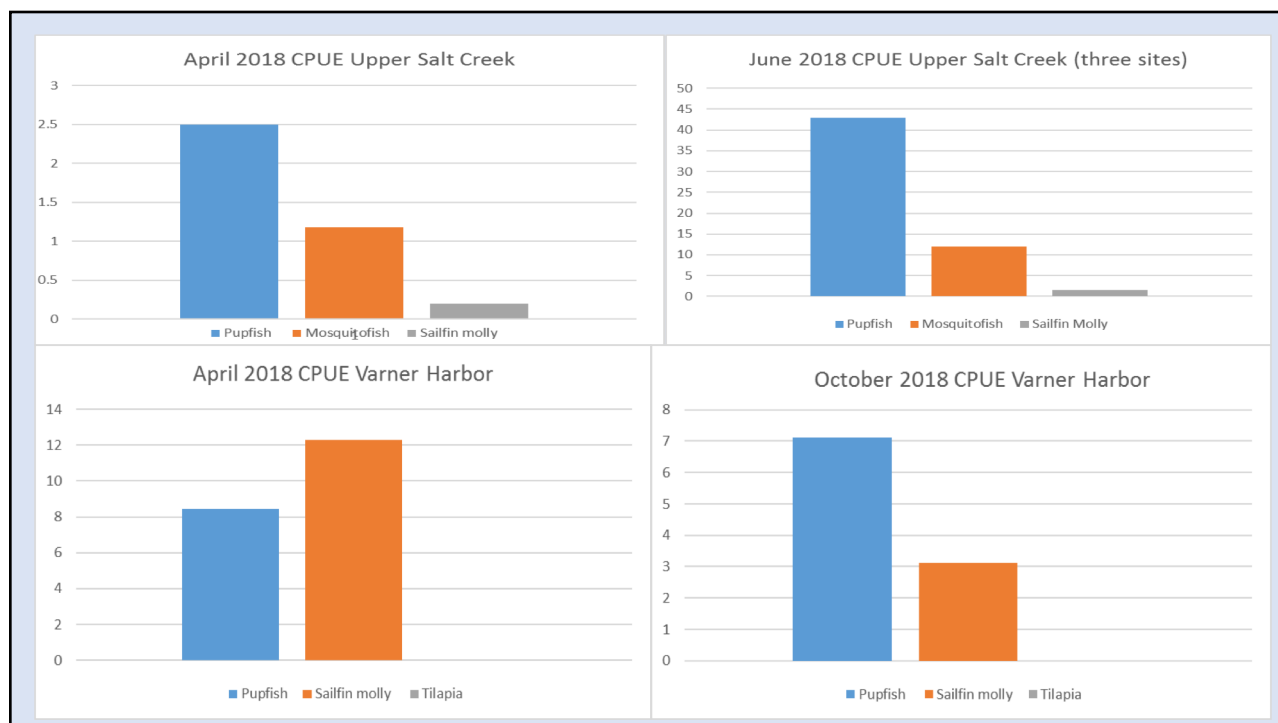
Trapping surveys conducted in selected tributaries, irrigation drains, refuges (artificial habitat), shoreline pools/ponds, Sea proper (primarily marinas)

Surveys generally conducted from late March through October or early November, when the species is most active

Frequency of surveys ranges from quarterly to every 5-10 years

San Felipe Creek: 2018 survey showed pupfish still present

South end drains will be surveyed in 2019



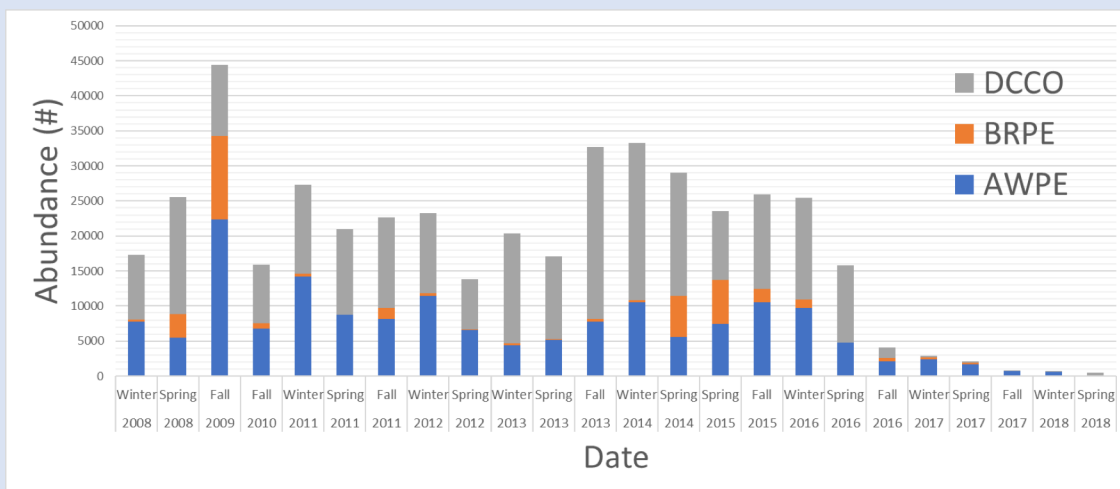
SALTON SEA AVIAN MONITORING



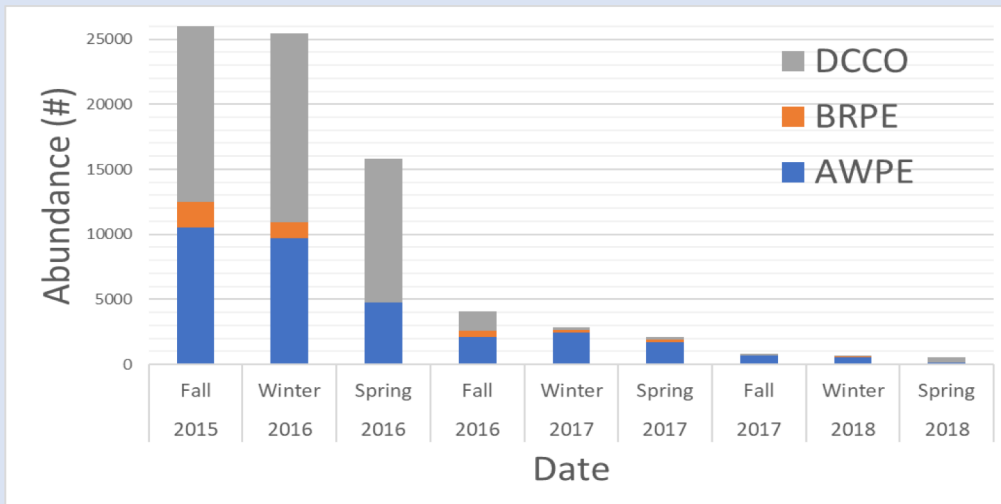
SALTON SEA AVIAN MONITORING

- **Aerial Surveys of piscivorous birds**
 - Double-Crested Cormorants (DCCO), Brown Pelicans (BRPE), American White Pelicans (AWPE).
 - Six surveys are completed from Nov-May by fixed wing aircraft.
 - Aircraft travels in a counter-clockwise direction around the perimeter of the Salton Sea
 - Aircraft also flies over the wildlife areas at the south end of the Salton Sea at an altitude of 60 m (200 ft).
- **Other Surveys: Pacific Flyway Nesting Birds; Shorebird; Marsh bird; Dead & Sick Birds**

Piscivorous Birds by Season and Year
Winter 2008- Spring 2018



Piscivorous Birds by Season and Year Fall 2015 – Spring 2018



Salton Sea
Tilapia



Salton Sea Tilapia Gill- Netting Sites



SALTON SEA GILL-NETTING PROTOCOL

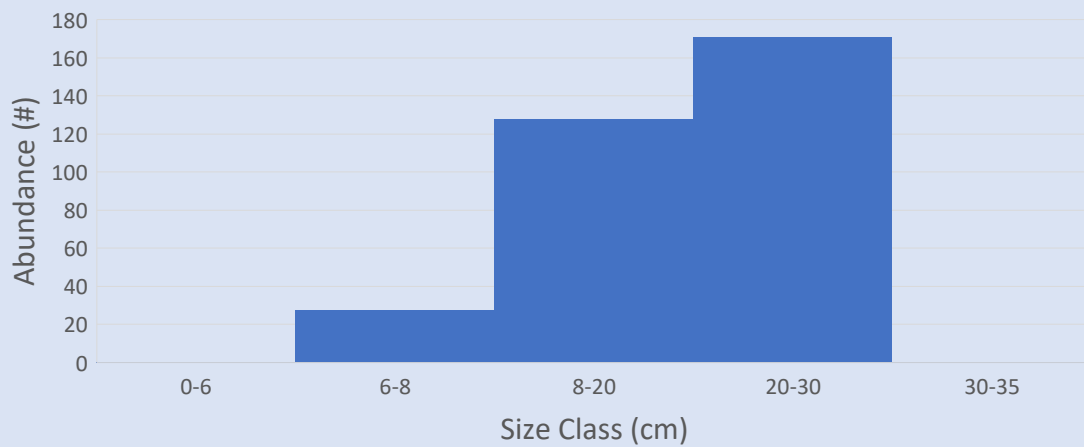
- NET SIZE: 45 M LONG
- GILL NET PANELS: 5
- MESH SIZE FOR EACH PANEL: 1, 2.5, 5, 7.5, & 10 CM
- NET SET IN THE FIELD FOR 24 H PERIOD

Salton Sea Tilapia

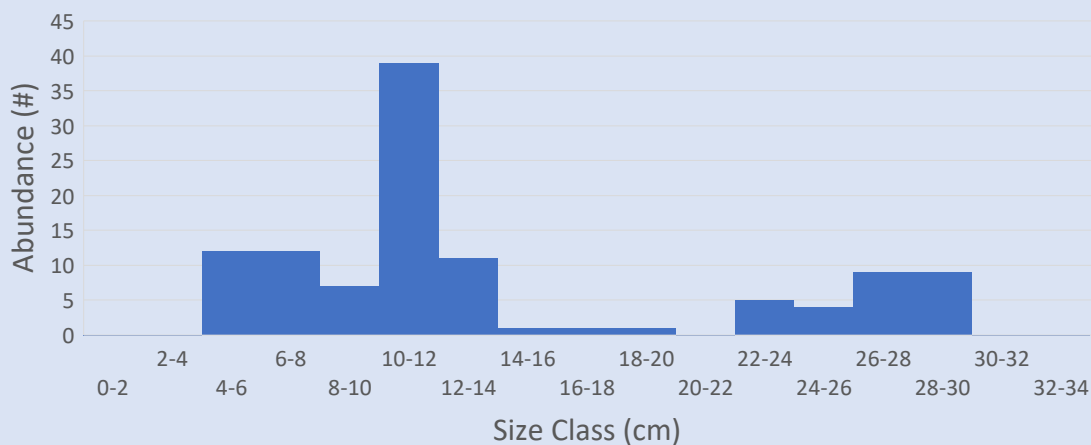
Catch per Unit Effort 2003-08, 2017&18

Year	Tilapia CPUE
2003	1.14
2004	7.23
2005	10.85
2006	10.05
2007	14.63
2008	27.01
2017	1.12
2018	0.45

Salton Sea Tilapia Size Structure for 2017



Salton Sea Tilapia Size Structure for 2018



CONCLUDING REMARKS

Salton Sea salt content is currently 61 g/L as Total Dissolved Solids, average seawater is 35 g/L.

Increase in salinity and reduction in freshwater flow into the sea may be indirectly responsible for the current reduction in the fish community and birds present at the sea.

The Salton Sea ecosystem appears stable, but at a lower bird/fish community abundances, especially 2017-18.

Even though desert pupfish are doing relatively well, their habitats are diminishing.

